

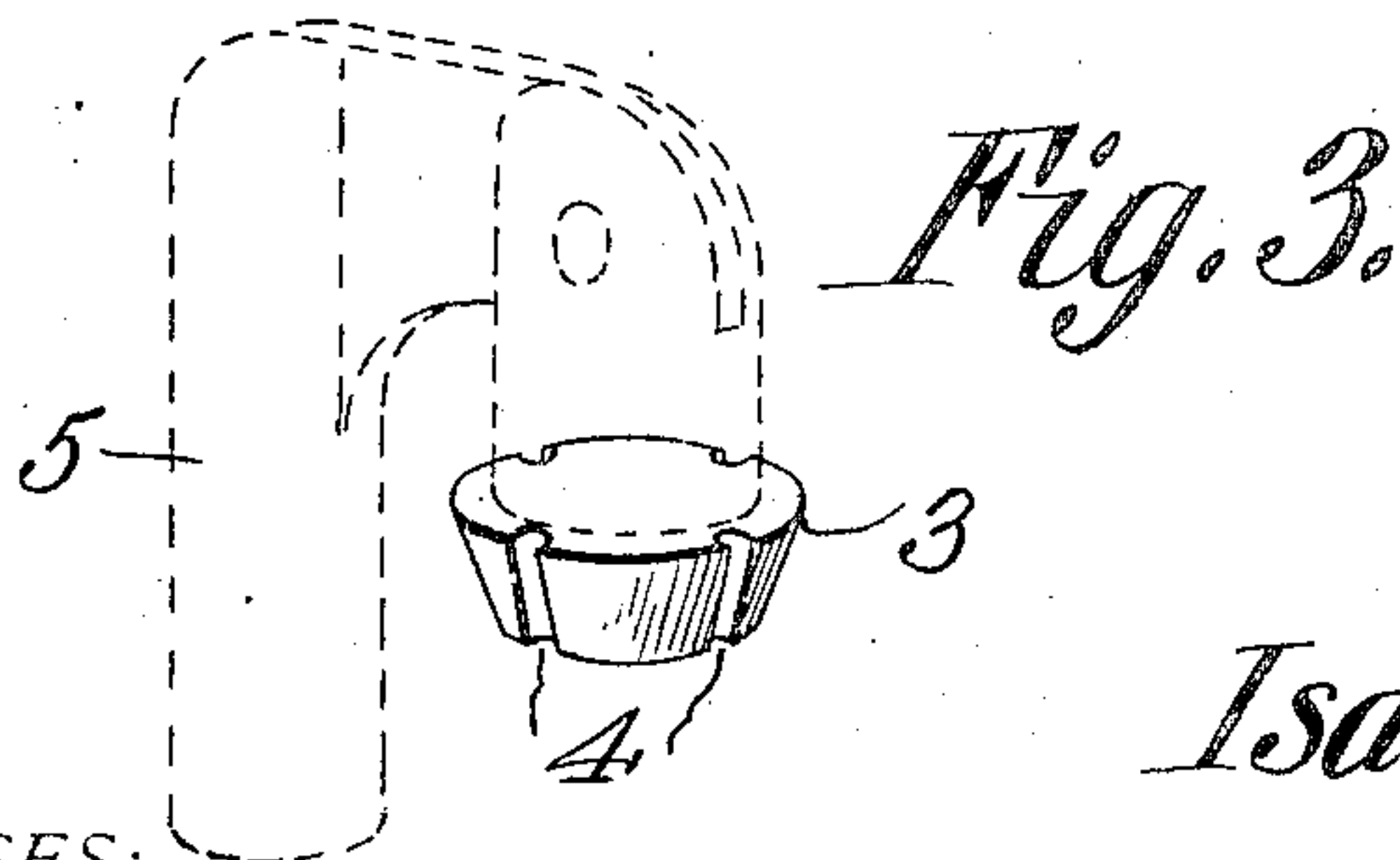
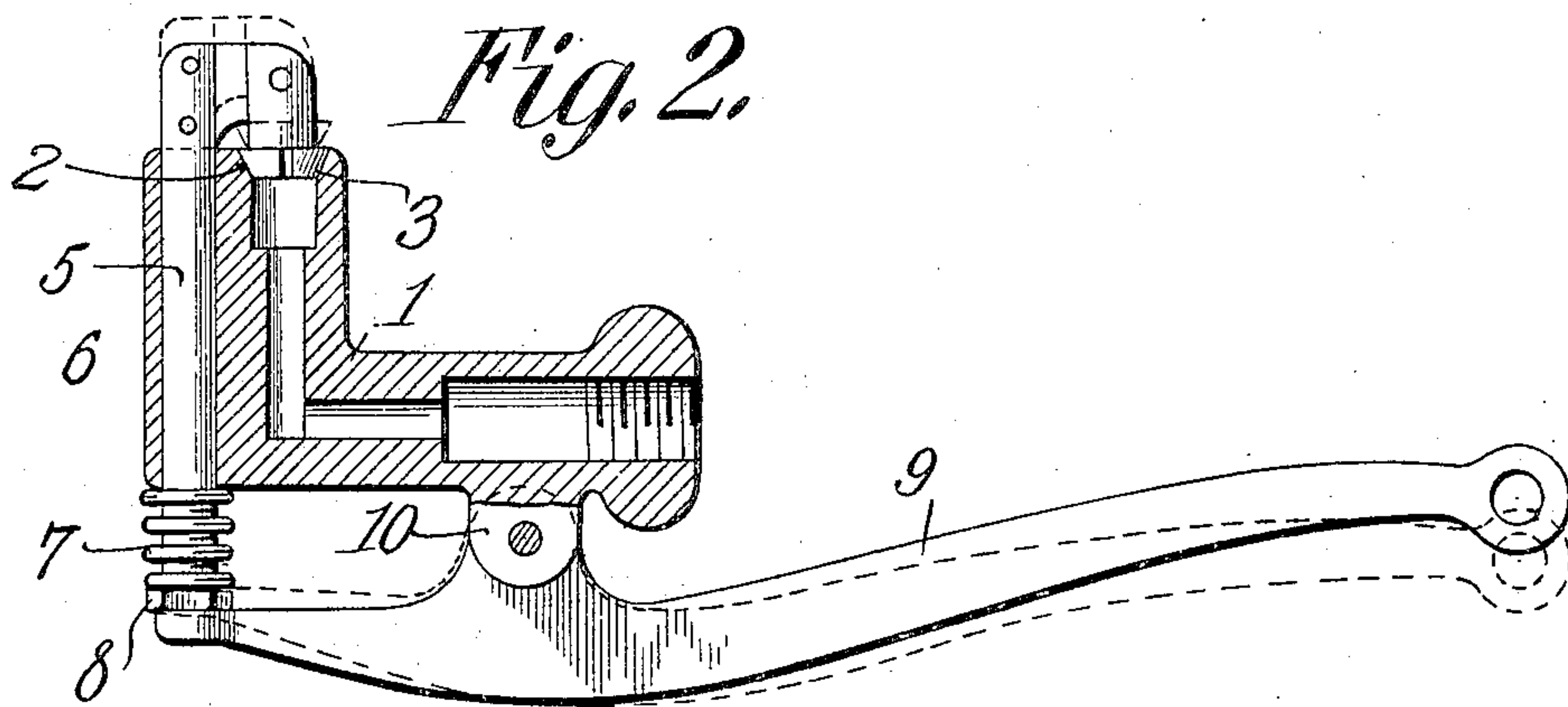
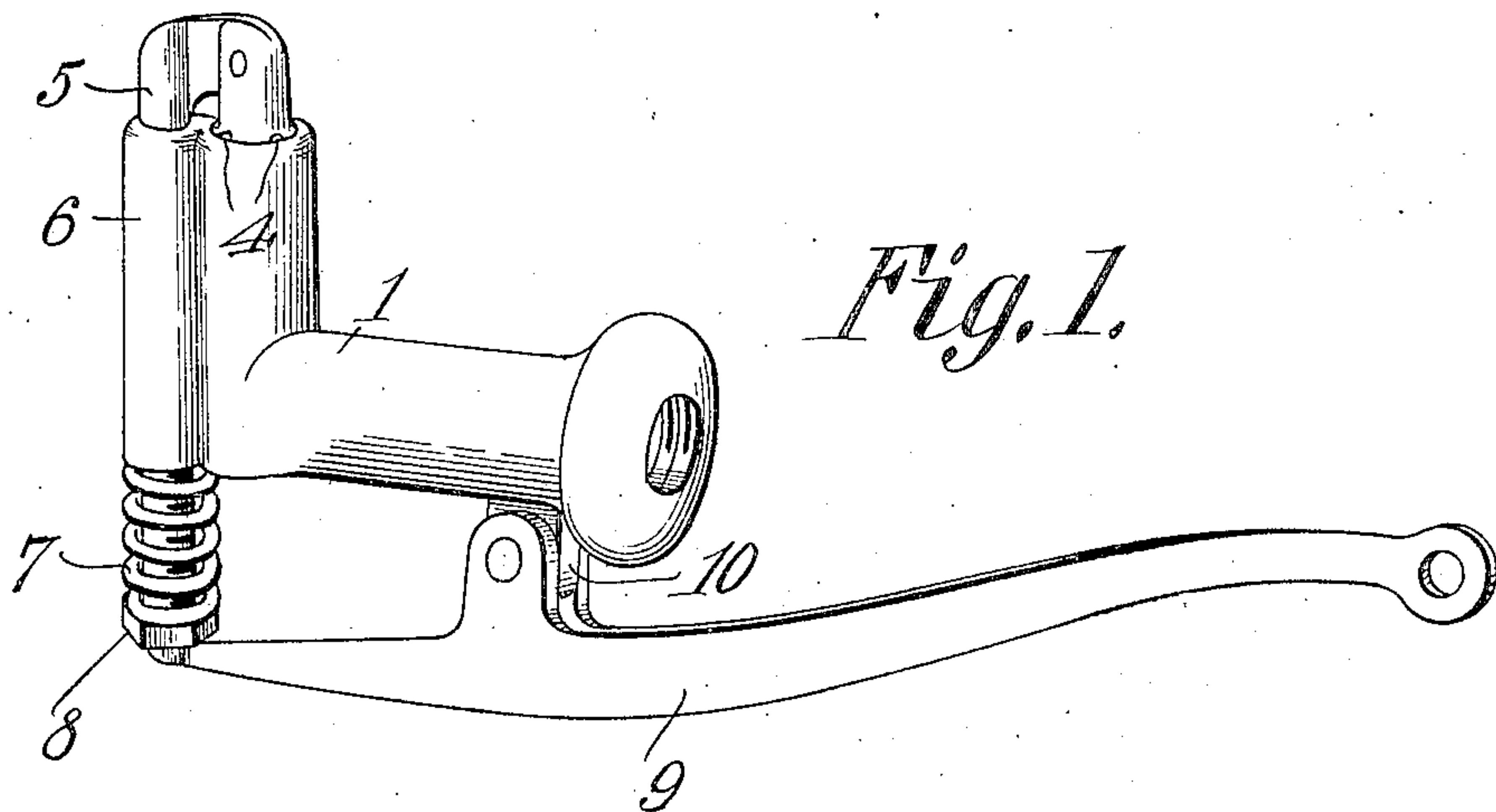
No. 843,945.

PATENTED FEB. 12, 1907.

I. W. HOOVER.

NOZZLE.

APPLICATION FILED AUG. 29, 1906.



WITNESSES:

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NOZZLE.

No. 843,945.

Specification of Letters Patent.

Patented Feb. 12, 1907.

Application filed August 29, 1906. Serial No. 332,506

To all whom it may concern:

Be it known that I, ISAAC W. HOOVER, a citizen of the United States, residing at Avery, in the county of Erie and State of Ohio, have invented a new and useful Nozzle, of which the following is a specification.

This invention relates to hydrocarbon-burners, and more particularly to nozzles such as ordinarily interposed between the vaporizer and the burner. As is well known to persons acquainted with this art, the vaporization of hydrocarbon oils results in the formation of carbonaceous particles, which in practice often clog the outlet-openings of the nozzles and oftentimes prevent the operation of the nozzle.

The object of the present invention is to overcome this objectionable result by providing a nozzle having means whereby accumulations of particles of this nature may be quickly blown from the nozzle whenever desired.

The invention consists of providing a plug in the outlet end of the nozzle, said plug being provided in its periphery with grooves, which when the plug is seated constitute outlets through which the vapor is adapted to be discharged. A spring is provided for holding the plug normally seated; but any suitable means may be employed for unseating the plug, and thereby increasing the size of the discharge-openings and permitting the gas or vapor under pressure to blow out any accumulations which may be seated within the apertures.

The invention also consists of certain other novel features of construction and combination of parts, which will be hereinafter more fully described, and pointed out in the claims. In the accompanying drawings is shown the preferred form of the invention.

In said drawings, Figure 1 is a perspective view of the nozzle. Fig. 2 is a section therethrough, showing by dotted lines the plug inserted; and Fig. 3 is a detail view of the plug, its connection with the stem being shown by dotted lines.

Referring to the figures by characters of reference, 1 is an angular tube constituting the nozzle, one end thereof being adapted to be connected to a vaporizer, (not shown,) while the other end is adapted to direct vapor into a burner. The outlet end of this tube is enlarged interiorly, as shown at 2, to form a seat for a frusto-conical plug 3, having a series of grooves 4 formed within the

periphery thereof. The outer end of this plug is secured to a stem 5, which is slidably mounted in a sleeve 6, formed upon the nozzle and parallel with the outlet portion of said nozzle. The end of the stem is screw-threaded and projects through a coiled spring 7, while a nut 8 is screwed upon the stem, and by adjusting the same the tension of the spring may be regulated. A lever 9 is fulcrumed upon an ear 10, extending from the nozzle, and one end of this lever is adapted to bear upon the end of the stem 5.

As will be obvious, the spring 7 serves to hold the plug 3 normally seated, so that the vapor discharged into the nozzle can only escape through the outlet end by the grooves 4. Should carbonaceous particles accumulate within these grooves, and thereby clog them and retard the escape of the vapor, it is merely necessary to pull on the free end of the lever 9, so as to press the stem 5 longitudinally. This will result in the compression of the spring 7 and the partial withdrawal of the plug from its seat. The vapor will therefore blow outward from the nozzle around the plug and will clean the grooves of any material which may have accumulated within them. The plug can be promptly resealed by releasing the lever and permitting the spring to return it to its normal position. It is of course to be understood that any other means than the lever 9 may be employed for actuating the stem and plug. If desired, this lever may be dispensed with and the spring 7 so tensioned that the increased pressure caused by the clogging of the outlet will be sufficient to overcome the tension of the spring and press the plug outward until the accumulations have been blown therefrom.

The preferred form of the invention has been set forth in the foregoing description; but I do not limit myself thereto, as I am aware that modifications may be made therein without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes as fairly fall within the scope of the claims.

What is claimed is—

In a nozzle the combination with a tube having an oil-passage therethrough, and an imperforate sleeve integral with the tube and parallel with a portion of said passage; of a plug movably mounted within the outlet end of the tube and having a groove normally constituting the outlet from the tube, a stem slidably mounted within the imperforate

sleeve and parallel with a portion of the oil-
passage, said stem being connected to the
plug, means upon the stem for holding the
plug normally seated, and means for actuat-
5 ing the stem to move the plug from its seat
and along a line extending through the oil-
passage.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses.

ISAAC W. HOOVER.

Witnesses:

J. O. ADAMS,

F. A. ROBERTS.